

AGRICULTURE AND ENVIRONMENT

BIOINDUSTRIAL AND CIRCULAR INNOVATION

CIRCULAR ECONOMY

FUNDING DETAILS

Optimization and Field Demonstration of Circular PVC-free Flooring

PolyCo Floors is working towards the development and commercialization of a product designed for circularity that will resolve the main drawbacks of current PVC-based flooring. In this project, prototype composition and processing conditions will be optimized to achieve best-in-class material properties. Sufficient prototype quantities will be produced to finalize specification related testing, while also enabling a field installation and demonstration (TRL 7) to assess real-world performance, gather customer feedback, and develop an early commercial presence. The successful execution of this project will contribute to the justification of a first-of-its kind circular luxury resilient flooring manufacturing facility in Alberta.



RECIPIENT:

**Rangoli Surfaces
Inc. (DBA PolyCo
Floors)**



TOTAL BUDGET:

\$1,192,474



PROJECT DATES:

**Jan 2024 –
Aug 2025**



PARTNERS:

Divine Flooring



AI FUNDING:

\$247,517



PROJECT TRL:

**Start: 6
End: 7**

APPLICATION

Housing demand in North America is higher than ever, and the demand for easily installed, low maintenance, and durable flooring is projected to continue at an unprecedented rate. Luxury vinyl flooring (LVF) is 100 % imported to Canada, has a linear life cycle and ends up in landfills. LVF is made of PVC, a problematic plastic that limits circularity and off-gases harmful volatile organic compounds causing poor indoor air quality. PolyCo is poised to disrupt the booming market with a sustainable flooring alternative offering a circular life cycle, and utilizing local manufacturing and local resources that will contribute to building the circular economy of plastics.

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ALBERTA INNOVATES

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PROJECT GOALS

- Optimize material-processing-property relationships to achieve product specifications and develop a best-in-class circular PVC-free flooring product.
- Carry out on-site demonstrations to validate flooring prototypes, gather customer feedback and assess real-world performance.
- Conduct a comprehensive life cycle assessment to evaluate the environmental benefits of PolyCo's product compared to luxury vinyl flooring.
- Identify and protect IP by safeguarding the processes, compositions, and technologies, and further enhance the competitive advantage of the company.

BENEFITS TO ALBERTA

- Build the first-of-its kind resilient floor manufacturing facility in Canada.
- Replace currently imported products from China with a locally manufactured environmentally friendlier alternative.
- Increase product export offer to the USA.
- Contribute to the circular economy of plastics in Canada.
- Generate new full-time jobs (25+) when in full scale.
- Contribute to train skilled labour in the province through established and developing relationships with the UofC, NAIT, and SAIT.
- Continue being an active member of the Plastics Research in Action Industry Project (Inter Pipeline) to reuse and recycle plastic in Canada.



1 Unique Product



2 Project Jobs



25+ Future Full
Time Jobs



\$50 M Future
Investment



1 Unique Process



2 Records of Invention
(Patent/Trade Secret)



130 kt/yr Future
GHGs Reduced

CURRENT STATUS

April 2025 – In progress

A successful trial of sheet manufacturing in the USA at Davis Standard (DS) was completed. Prototypes passed specifications of dimensional stability and flatness that were superior to calendaring technologies previously evaluated. The design and engineering of the plant including material handling has been advanced. Energy and input requirements are being confirmed to execute an LCA pre-commercialization.

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